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The Impact of the Homecoming Reception on the Development of Posttraumatic Stress Disorder: The West Haven Homecoming Stress Scale (WHHSS)

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This study reports on the development of a self-report measure of the homecoming experience among Vietnam veterans with posttraumatic stress disorder (PTSD). The West Haven Homecoming Stress Scale (WHHSS), measuring Frequency of Events, Intensity of Feelings, and Level of Support during the first 6 months after return from overseas, and within the past 6 months, was collected from 247 veterans who were receiving inpatient treatment for PTSD. Homecoming Stress was the most significant predictor of current PTSD symptomatology superseding combat exposure, childhood and civilian traumas, and stressful life events. A factor analysis resulted in four orthogonal factors: Shame, Negative Interpersonal Interaction, Social Withdrawal, and Resentment. Homecoming Stress was unchanged over the course of a 4 month inpatient program.

KEY WORDS: homecoming; PTSD; veterans; assessment.

During the past 2 decades, the study of posttraumatic stress disorder (PTSD) has focused on the nature and impact of the traumatic event on the individual, family, and society. Identifying the biological, psychological, and social mechanisms by which a traumatic experience is transformed into

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an illness has been viewed as the essential scientific challenge in the field (Green, 1994). Social variables such as support from family and friends after a traumatic event have in most research studies been assumed to be only mediators of the stress intensity, and not essential to the development of the disorder (Flannery, 1990). More rigorous examinations of the nature and role of the homecoming experience after traumatic events, from the perspectives of both support and cognitive attribution, are thus needed to assess their contributions to our understanding of the etiology of PTSD.

Although standardized scales have been developed to estimate intensity of the trauma (e.g. Combat Exposure Scale (CES), Keane et al., 1989), no such scale has been developed to measure the intensity of the stress experienced at homecoming. Limited research attention has been paid to this area, and without a standard scale, researchers cannot compare results systematically. To our knowledge, no published reports have presented detailed frequency data on the type of homecoming Vietnam veterans experienced (i.e., amount of time from combat to arrival, frequency of welcoming celebrations, amount of support received), or on the homecoming experienced by other traumatized individuals such as rape victims (i.e., attribution of blame, support from family, treatment by investigators), despite clinical evidence that these factors are significant to the victims (Herman, 1992; Wilson, 1980).

It is possible that factors associated with the homecoming may be related to the etiology and development of PTSD. After a traumatic event, victims are typically overwhelmed, confused, and in great need of support. They are likely to be extremely sensitive to how others, particularly loved ones, describe, define, or make attributions about the event, and the role the victim played (Janoff-Bulman, 1992). If these ascribed meanings are negative or blaming, the victims' aversive responses to memories of the traumatic memory may be intensified, leading to increased attempts at suppression and avoidance. Thus, if a rape victim comes home to discover that her family and husband blame her for being raped, accusing her of "asking for it," her inner experience of terror may be intensified and more highly encapsulated. The extent to which victims' experiences are consensually validated or invalidated by their families or societal milieu may have an important effect on their own individual psychological adaptation to the traumatic stressor (Flannery, 1990; Green, Wilson, & Lindy, 1985).

Flannery (1990) in his extensive review of the literature, noted that the potential effect of social support can be conceptualized as providing interpersonal networks or stress buffers. Networks within which the person is embedded offer perceptual stability, problem-solving information, and acceptance. Buffers mediate the effects of stress by providing coping assistance, sharing of emotional responses, and enhancing a sense of mastery. Kadushin (1985) divided social support into three aspects: (1) the structure

of relationships (e.g., frequency of contact, individual or group settings), (2) the types of persons (e.g., family, friends, other victims), and (3) the types of activities (e.g., discussion, material help, tasks). In this conceptualization, the major role hypothesized for social support is as a buffer against the development of the disorder. Kadushin also pointed out the difficulties in measuring social support when patterns of help-seeking may involve contrasting elements: for example, receiving support from a close group of friends who are also involved in substance abuse, or seeking help from a professional who misdiagnoses the disorder. These situations may not enhance adaptation, and yet are common patterns of help-seeking among Vietnam veterans. Janoff-Bulman (1992) highlights the effects on the trauma victim of cognitive attributions made by the social network. Potential negative effects include reactions of discomfort, blaming the victim, stigmatization, and ambivalent communications. These reactions may prevent the victim from "rebuilding a valid, believable representation of reality." (p. 142).

Several studies provide evidence for the healing role of social support. Rape survivors recover more rapidly if involved in supportive, intimate relationships (Burgess & Holmstrom, 1979; Kilpatrick, Veronen, & Best, 1985). Vietnam veterans with PTSD have significantly less supportive social networks than those without PTSD (Escobar et al, 1983; Keane et al., 1985; Solomon & Oppenheimer, 1986; Stretch, 1985, 1986).

The purpose of this study was to conceptualize and then construct a measure of homecoming stress for Vietnam veterans and to assess its relationship to current PTSD symptoms. A second goal was to determine if intensive treatment could significantly influence the veterans' feelings about their homecoming.

The Concept of Homecoming

Numerous clinical articles have poignantly described the negative reception that Vietnam veterans received after the war, and its potential impact on their lives, and eventual expression in PTSD symptoms (Marrs, 1988; Shatan, 1985; Wilson, 1980). Veterans in these studies report being shamed or ignored and blamed for the poor outcome of our military efforts in Vietnam. Factors such as the rapid return from overseas by airline and the turnover in unit membership resulted in significant isolation among veterans during and after the war. Differences between generations led to a reluctance to embrace the returning soldiers by established veterans organizations. Veterans typically returned home after the most powerful emotional experience of their lives to find little acknowledgment and much misunderstanding by their families and society at large.

Two empirical studies give support to the hypothesis that the homecoming experience, as opposed to social support in general, may impact on the actual development of PTSD. Wilson and Krauss (1985) developed the Vietnam Era Stress Inventory (VESI) scale which assessed the homecoming experience, divided into two time periods: the return from combat zone and the homecoming period (6 months after return). Among the scale items were time-frame of return, satisfaction with homecoming, rejection experiences, cynicism, employment, and openness about combat experiences. They found that one factor within this scale—*psychological isolation during the first 6 months*—was the strongest predictor of PTSD ten years after the war, explaining 43% of the variance. Exposure to injury or death in Vietnam was the second best predictor, accounting for 29% of the variance. The authors proposed that psychological isolation is responsible for the veteran's inability to talk about the trauma and his or her loss of connection with society and family. Psychological isolation also interferes with the assimilation of traumatic material by increasing the defenses against intrusive imagery such as denial, numbing, and avoidance. Finally, isolation prevents the veteran from seeking out or attracting material or emotional support from others. One limitation of their analysis was that some items in their measure of psychological isolation overlap with symptoms associated with PTSD, thereby creating a potential confounding of the two variables.

Fontana and Rosenheck (1994) in their secondary analysis of data from the National Vietnam Veterans Readjustment Study (NVVRS, Kulka et al., 1990) also found that a rejecting homecoming reception was the strongest predictor of PTSD, followed by combat exposure. They analyzed the data from 1198 male Vietnam veterans from a representative community sample, measuring pre-military, military, and postmilitary variables using a structural equation modeling to construct an etiological model of PTSD. The homecoming reception was represented by two variables: (1) society's acceptance, pride, and respect for the returning veteran, and (2) the family's availability to talk with and to provide help to the veteran, as assessed by the veteran. They concluded that, "the homecoming is a critical event in determining whether acute stress reactions are either diminished to subclinical intensity or are preserved undiminished to become recognized at some later point as PTSD" (p. 683). In their view, a rejecting reception had the effect of (1) discouraging the veteran from talking about and processing his perceptions, (2) preventing ventilation of the emotions associated with the trauma, (3) increasing the veteran's self-doubt and guilt, and (4) supporting a pattern of maladaptation that reinforces the development of a chronic condition.

These preliminary investigations suggest a need for further study using a standardized measure of homecoming stress. The NVVRS and VESI measures are different from one another, preventing direct comparison of

data. To meet this need, we constructed a specific scale for measuring homecoming stress.

Method

Scale Development

We designed our scale based on a model following Fontana and Rosenheck (1994) that suggests that PTSD symptoms are the expression of the following factors, listed chronologically: (1) pre-military factors such as childhood traumas and personality disorder, (2) war zone trauma, (3) homecoming stress, and (4) postmilitary stressors and traumas. It was hypothesized that veterans with high levels of traumatic exposure or stress before, during and after the military are most likely to develop PTSD. What is still poorly understood are the relationships among these factors, and which ones are the most significant to the development of PTSD. In the absence of direct observation, our scale is based necessarily on the veterans' self-report.

We conceptualize *homecoming stress* as the trauma victim's beliefs and feelings that they have not been welcomed back home, and not accepted or helped in their readjustment by family and society. This cognitive and affective state may vary over time and can be measured long after the traumatic event. A person's homecoming stress is his/her reaction to and perception of actual events of the homecoming period, which include (1) the immediate reception of the person by family and society, (2) specific events of humiliation or privilege experienced during the first six months, and (3) level of emotional and material support provided by family and society. However, homecoming stress presumably may be worsened or improved years later by other events or reactions from significant others. The advantage of this definition of homecoming stress is that it provides a dynamic measure that can be periodically re-tested, due to the fact that it is based on the person's assessment of the homecoming rather than an attempt at an objective sum of negative events.

Procedure. Individual items with face validity were developed for the initial version of the WHHSS through clinical interviews with veterans, items mentioned in the clinical literature, and from Wilson's VESI scale (Wilson & Krauss, 1985). We attempted to include only those items directly reflecting the homecoming experience, and to avoid items that overlapped with symptomatology, physical or medical problems, or general stressful life events. The initial version of the WHHSS was administered to and then discussed with 20 veterans not in the current study, who made suggestions to add or re-word several items.

The final version of the WHHSS includes items organized into three domains: the veterans' perception of the *Frequency of Events* (9 items) such as fights, resistance from veteran groups, or insults from family or friends, (scored never, once or twice, once a month, once a week, once a day); *Intensity of Feelings* (13 items) such as shame, pride, or anger about the homecoming, (scored not at all, a little, moderately, a lot, intensely); and *Level of Support* (10 items) from family (divided into mother, father, spouse, siblings, other family, and friends), and society (divided into veterans groups, the VA, government, and people in general), (scored very supportive, somewhat supportive, neutral, somewhat unsupportive, very unsupportive). Veterans were asked to rate these items for two time periods: the Return Period (the first 6 months after returning from Vietnam), and Current Period (during the past 6 months). The Current form of the scale is designed for use as a change measure. The Total Homecoming Stress score was determined by the mean of Events, Feelings, and Support (scoring reversed to be in negative direction). All items range between 1 and 5, with higher scores indicating a more rejecting homecoming reception.

Background Items. A number of other items thought to be relevant to the homecoming reception were included in a Background section of the questionnaire. These included: (A) age, race, branch of service, dates of entry and discharge, number of military tours, rank upon arrival home, and number of veterans in the immediate family; (B) time from combat to arrival in the United States, from arrival to home, from home to first employment, and time spent in hospitals recuperating or stationed on bases; and (C) objective aspects of the reception such as presence of protesters, town or family celebrations, and employment opportunities.

Subjects

The WHHSS was administered to 247 male veterans who were consecutive admissions to the inpatient PTSD program at the West Haven VA Medical Center, from Sept. 1992 to Sept. 1994. The sample consisted of 102 veterans who were entering the four-month specialized inpatient unit (SIPU), and 145 who were entering the 4-week Evaluation and Brief Treatment unit (EBPTU).

Other Measures

In addition to the WHHSS, each veteran was administered the Mississippi PTSD Scale (MISS; Keane, Caddell, & Taylor, 1988), the Combat Exposure Scale (CES; Keane et al., 1989), and the Holmes and Rahe Stressful

Life Events Scale (Holmes & Rahe, 1967) that measured general life events in the six months after the return. The 102 veterans entering the SIPU were also administered the Helzer Antisocial Childhood index (Helzer, Robins, & McEvoy, 1987), an inventory of lifetime civilian traumas from the War Stress Inventory (Fontana & Rosenheck, 1993), and the Clinician Administered PTSD Scale (CAPS; Blake et al., 1990). In addition, 89 of these veterans were re-administered the Current version of the WHHSS at the end of their treatment, to test for treatment effects on homecoming stress.

Test-retest Reliability

The WHHSS was administered to 25 veterans not part of the present study at two times, between 1 and 2 weeks apart. Test-retest reliabilities for both background factors and homecoming stress scale scores were substantial, all $r(25) > .70$, $p < .05$.

Data Analysis

Construct validity was evaluated by intercorrelations among scale measures and homogeneity of variance. All correlations were corrected for multiple comparisons by the Bonferroni method (Pedhazur, 1973). A varimax factor analysis on the Return scale items was performed on the sample and the resulting new factor structure was then used to construct a revised scoring method. To evaluate significant differences between the Return and Current forms of the scale, *t*-tests on individual items and one-way, repeated measures ANOVAs of the Return and Current forms were used to assess treatment outcome between admission and discharge. Step-wise multiple regression analysis was used to determine the relative contribution of each independent variable on the PTSD symptom measures (MISS and CAPS), by hierarchically entering the nine stress-related variables and then removing those that failed to achieve significance in the equation.

Results

Background Items

Table 1 lists the means and standard deviations of background items. Most of the sample were White, served in either the Army or Marines, and served one tour. Nearly two-thirds had a father who was a veteran, and on average each had approximately one other family member who

served in the military. Their modal year of entry into the armed services was 1967, year of return from overseas 1969, and year of discharge 1970. On average, they arrived stateside 4 weeks after their last combat experience, and saw a family member 13 days later. They began employment an average of 32 weeks after return. One-third spent some time in the hospital recuperating, two thirds spent time in a stateside base, and 23% spent time on a foreign base before returning home.

More than half saw protesters at the airport, 15% were given parties by their families, and only 2% received a formal welcome from their town. Jobs were waiting for 14% of the veterans, and 37% received unemployment insurance.

Stress Measures

Table 1 also lists the means and standard deviations of the various stress-related measures for the entire sample. Not all measures were administered to all the patients, resulting in different *n*s. The veterans scored well above the criteria for PTSD according to the MISS, and indicated moderately heavy levels of combat on the CES. On average, 29% of the sample experienced childhood abuse, and civilian traumas were common across their lifetime. Their Stressful Life Events in the 6 months after the war were also significantly elevated above reported norms (Holmes & Rahe, 1967). Combat exposure was unrelated to the other measures of stress. Premilitary civilian traumas were significantly correlated with the Helzer Antisocial index, $r = .35$, $n = 104$, $p < .01$, and noncombat traumas during the military were correlated with previous childhood abuse, $r = .38$, $n = 104$, $p < .01$.

Relationship of Background Items to Stress Measures

Branch of service was a factor only for level of combat exposure (CES): Marines ($M = 32.5$, $SD = 7.2$) and Army ($M = 30.05$, $SD = 8.0$) veterans experienced more combat than Air Force ($M = 23.6$, $SD = 6.8$), and Navy ($M = 22.4$, $SD = 10.3$) veterans, $F(3,242) = 8.68$, $p < .01$.

Race was not a significant factor on any measure. There was a trend ($p < .10$) for White veterans to have experienced fewer stressful life events during their first six months home on the Holmes and Rahe scale ($M(SD)$: Whites = 319 (220), Blacks = 395 (243), Hispanics = 458 (303)).

Number of tours was a significant factor on a number of measures: veterans who served three or four tours compared to those who served one or two tours reported significantly more stressful life events, $F(3,222) =$

Table 1. Means/Percents and Standard Deviations of Study Variables (N = 247)

Variable	*n*	*M*/%	SD
Race	247		
White		79%	
Black		17%	
Hispanic		3%	
Other		1%	
Branch	247		
Marines		36%	
Army		55%	
Navy		7%	
Air Force		2%	
Year of Entry	247	1967 (1962–1972)	1.76
Year of Return	247	1969 (1965–1975)	2.52
Year Discharge	247	1970 (1965–1988)	2.41
No. of tours	247	1.29	.59
One		.76	
Two		.19	
>Two		.05	
Rank on arrival	247	3.70	1.32
Father in service	247	.64	.48
No. of family in Service	247	.73	1.04
Timeframe			
Weeks combat/arrival	247	4.04	5.87
Days arrival/home	247	12.98	42.61
Weeks arrival/employment	247	31.69	43.29
Hospital stay?	247	33%	
Weeks in hospital	247	11.16	11.22
Stay on stateside base?	247	66%	
Stay on foreign base?	247	23%	
Reception			
Protesters on arrival		63%	
Family party		15%	
Town celebration		2%	
Job waiting		14%	
Unemployment insurance		37%	
PTSD			
Mississippi Scale	240	138.23	16.35
CAPS			
Frequency	142	2.76	.51
Intensity	142	2.26	.47
Childhood stress			
Childhood abuse	102	.29	.71
Helzer antisocial	102	1.40	1.95
Civilian traumas	102	7.18	10.76
Wartime stress			
Combat exposure	234	30.26	8.28
Noncombat traumas	102	2.74	3.64
Postwar stress			
Holmes & Rahe	226	337.96	230.85
Civilian traumas	102	8.72	6.12

7.53, $p < .001$, and greater overall intensity of PTSD symptoms on the CAPS, $F(3, 142) = 4.15, p < .01$.

Number of weeks from combat to arrival was significantly negatively correlated with overall frequency of PTSD symptoms on the CAPS, $r(140) = -.24, p < .05$, corrected for multiple comparisons, suggesting a more rapid return is associated with a poorer adaptation. This measure was also correlated at nearly significant levels ($p < .10$) with all PTSD symptom clusters on the CAPS. Interestingly, being stationed on a foreign base before returning was significantly associated with having more avoidance symptoms, $r = .32, n = 142, p < .01$ corrected for multiple comparisons. Items reflecting aspects of the initial reception were not significantly correlated with PTSD measures.

Homecoming Stress Measures

The most highly endorsed items in the Events (Return period) domain included: having a family member insult you about being a Vietnam veteran ($M = 2.80$, $SD = 1.37$), being told by someone that they didn't want to hear about Vietnam ($M = 2.23$, $SD = 1.30$), and getting into a physical fight over Vietnam ($M=2.21$, $SD = 1.06$). The least endorsed items included: being given special privileges ($M = 1.11$, $SD = .47$), speaking in public about Vietnam ($M = 1.15$, $SD = .52$), and being refused entry by a service organization ($M = 1.42$, $SD = .74$). The most endorsed items in the Feelings (Return period) domain included: anger at the government ($M = 4.35$, $SD = .97$), resentment over way they were treated ($M = 4.12$, $SD = 1.10$), and feeling like a stranger in a foreign land ($M = 4.10$, $SD = 1.03$). The least endorsed items included: being interested in the political debate about Vietnam ($M = 2.29$, $SD = 1.53$), feeling their family was proud of them for serving in Vietnam ($M = 2.66$, $SD = 1.32$), and wishing to re-enlist to go back to Vietnam ($M = 2.68$, $SD = 1.63$).

Table 2 lists the intercorrelations among domains of the WHHSS. As expected, Support was negatively correlated with Events and Feelings, which were moderately correlated with each other, on both Return and Current forms. Respective domains across forms were also highly correlated with each other. Alpha coefficients (Cronbach, 1951) were Total Homecoming Stress- Return form ($\partial = .77$), Current form ($\partial = .77$), and for domains: Events-Return ($\partial = .57$), Current ($\partial = .57$); Feelings-Return ($\partial = .73$), Current ($\partial = .73$); Support-Return ($\partial = .58$), Current ($\partial = .48$). Due to the low internal consistencies of the domains, factor analyses of the Return and Current scales were conducted.

Table 2. Intercorrelations Among WHHSS Domains (N = 247)[a]

	SUPP-R	EVTS-R	FEEL-R	TOT-R	SUPP-C	EVTS-C	FEEL-C
SUPP-R	—						
EVTS-R	-.31	—					
FEEL-R	-.43	.29	—				
TOT-R	-.84	.61	.78	—			
SUPP-C	.52	-.13	-.24	-.24	—		
EVTS-C	-.08	.42	.11	.29	-.16	—	
FEEL-C	-.26	.14	.64	.54	-.38	.27	—
TOT-C	-.45	.26	.49	.55	-.81	.50	.79

[a]All values above r = .22 are $p < .01$, above r = .25 are $p < .001$, corrected for multiple comparisons by the Bonferroni correction. SUPP = Support; EVTS = Events; FEEL = Feelings; TOT = Total; R = Return; C = Current.

Factor Analysis

A factor analysis of the items in the WHHSS was conducted on the total sample for both the Return and Current forms, resulting in four orthogonal factors labeled: Shame, Negative Interpersonal Interaction, Social Withdrawal, and Resentment. These factors were nearly identical between the two forms. One item (receiving special privileges) failed to load significantly on any factor and was dropped from the scale. Item loadings for the Return form are listed in Table 3. Means and standard deviations for the resulting revised Total Homecoming Stress (Return) were M = 3.22, SD = .56 and for Current, M = 2.85, SD = .53. Alpha coefficients on the Return form were: Total Homecoming Stress (α = .77), Shame (.81), Negative Interaction (.71), Social Withdrawal (.70), and Resentment (.69); on the Current form: Total Homecoming Stress (.77), Shame (.78), Negative Interaction (.73), Social Withdrawal (.71), and Resentment (.68).

Comparison of Return and Current Forms

Table 4 lists the results of t-tests comparing the WHHSS scores from the Return and Current forms. All homecoming stress variables showed significant improvement, and all individual items were significantly improved except for the six listed in the table.

Table 3. WHHSS Factor Loadings and Proportion of Variance on Entire Sample (N = 247)

Item	Loading
Shame (18.9%)	
B4. You felt proud of being a Vietnam veteran.	-.78
B1. You felt ashamed of yourself for being a Vietnam veteran.	.71
B10. You wished you had never gone to Vietnam.	.65
B11. You believed that the war in Vietnam was wrong or immoral.	.64
B12. You felt patriotic.	-.64
B6. You felt like hiding your identity as a Vietnam veteran.	.57
A5. You told someone that you were not a Vietnam veteran.	.56
B8. You felt your family was proud of you for serving in Vietnam.	-.39
A9. You wore Vietnam insignia on your hat, shirt, or jacket.	-.38
Negative Interpersonal Interaction (12.1%)	
A1. A family member or friend insulted you or put you down about being a Vietnam veteran.	.72
A4. You got into a physical fight with someone over Vietnam.	.66
A3. You tried to tell someone about your war experience only to be told that they didn't want to hear it.	.65
A10. Other servicemen who had not served in Vietnam insulted you or put you down about being a Vietnam veteran.	.58
A8. A service organization such as the VFW or American Legion refused to let you into an event because you were a Vietnam veteran.	.44
Social Withdrawal (7.9%)	
C2. Total Societal Support.	-.70
A2. Someone you knew said, "I respect you for serving our country."	-.69
A8. You felt your family was proud of you for serving in Vietnam.	-.58
C1. Total Family Support.	-.53
A6. You spoke in public settings about your experiences in Vietnam.	-.43
B6. You felt like hiding your identity as a Vietnam veteran.	.43
B9. You were interested in the political debate about U.S. involvement in Vietnam.	-.36
Resentment (6.7%)	
B3. You felt anger at the government.	.77
B2. You felt resentment over the way you were being treated.	.74
B5. You felt like a stranger in a foreign land.	.65
B7. You felt like re-enlisting in the service in order to go back to Vietnam.	.41

Relationship of Homecoming Measures to Background Items

Negative Interaction (Return) was significantly correlated with number of tours, $r(203) = .24, p < .05$, shorter time between combat and arrival, $r(203) = -.25, p < .05$, seeing protesters on arrival, $r(203) = .23, p < .05$, and number of arrests, $r(203) = .25, p < .05$, corrected for multiple comparisons.

Table 4. Comparisons Between Return and Current Forms of WHHSS (N = 247)[a]

Measure	Form		
	Return	Current	$t(df = 245)$
Total homecoming stress	3.22 (.56)	2.85 (.53)	11.20***
Shame	2.98 (.92)	2.71 (.84)	5.84***
Negative interaction	2.11 (.73)	1.54 (.58)	14.29***
Social withdrawal	4.00 (.72)	3.61 (.67)	8.92***
Resentment	3.81 (.80)	3.57 (.84)	4.73***

[a]Items range from 1 (low) to 5 (high). ***$p < .0001$.

Items not significantly changed from Return form to Current form:

1. Someone said, "I respect you for serving our country."
2. Felt anger at the government.
3. Felt like re-enlisting in order to go back to Vietnam.
4. Felt your family was proud of you for serving in Vietnam.
5. Wished you had never gone to Vietnam.
6. Total Family Support.

Resentment (Return) correlated with a longer time from arrival to first employment, $r(203) = .25, p < .05$, not having a job waiting, $r(203) = -.21$, $p < .05$, and seeing protesters on arrival, $r(203) = .21, p < .05$.

There were no other significant correlations among these variables, and none on the Current form except between Negative Interaction and shorter time from combat to arrival, $r(203) = -.26, p < .05$.

Relation of Stress and Homecoming Measures to PTSD Symptoms

Table 5 lists the correlations for the entire sample between stress measures, organized chronologically, and the PTSD symptom measures, MISS and CAPS. The strongest correlations existed between the Homecoming Stress scale and these PTSD measures. The Current form was significantly correlated only with the MISS. Combat Exposure showed the next highest level of correlation with the MISS, though it was not significantly correlated with the CAPS. Both Total Homecoming Stress and Negative Interpersonal Interaction were significantly correlated with PTSD symptoms. Resentment was highly correlated with the MISS, particularly the Current form. In addition, Social Withdrawal (Return) was negatively correlated with Stressful Life Events, $r(224) = -.23, p < .05$, and Post-military civilian traumas are correlated with Total Homecoming Stress (Return), $r(100) = .28, p < .05$.

A multiple regression analysis was conducted on each of the independent PTSD symptom measures, the MISS, and CAPS-Frequency and

Table 5. Correlations of Stress Measures with PTSD Measures[a]

Measures	Mississippi	CAPS-Freq	CAPS-Inten
Pre-combat			
Helzer antisocial	-.22 (101)[b]	-.08 (101)	-.05 (101)
Civilian trauma	-.11 (101)	-.04 (101)	-.05 (101)
Childhood abuse	-.16 (101)	-.05 (101)	-.16 (101)
During combat			
Combat exp (CES)	.20* (234)	.21 (140)	.06 (140)
Civilian trauma	-.08 (101)	-.06 (101)	-.03 (101)
Postcombat period			
Stressful life events	.03 (215)	-.03 (126)	.06 (126)
Civilian trauma	.09 (101)	.05 (101)	.08 (101)
Return period			
Total HS	.38** (236)	.26* (144)	.30* (144)
Shame	.19 (236)	.13 (144)	.18 (144)
Negative interaction	.22* (236)	.24* (144)	.22* (144)
Social withdrawal	.21 (236)	.12 (144)	.04 (144)
Resentment	.35** (236)	.18 (144)	.21 (144)
Current period			
Total HS	.35** (236)	.17 (144)	.09 (144)
Shame	.24* (236)	.07 (144)	.07 (144)
Negative interaction	.14 (236)	.17 (144)	.09 (144)
Social withdrawal	.23* (236)	.09 (144)	-.02 (144)
Resentment	.43** (236)	.21 (144)	.21 (144)

[a]All values have been corrected for multiple comparisons by the Bonferroni correction. *$p < .05$. **$p < .01$.
[b]*n*s are in parentheses.

CAPS-Intensity, initially entering the nine stress-related measures, and then removing those variables from the equation which failed to significantly predict the independent measure. The only significant predictors of the MISS were the Homecoming Stress (Return), beta = .19, $df = 100$, $p < .05$, and the Helzer Antisocial Index, beta = -.21, $df = 100$, $p < .05$. The CAPS-Frequency measure was best predicted by the Homecoming Stress (Return), beta = .28, $df = 143$, $p < .001$, followed by Combat Exposure, beta = .24, $df = 143$, $p < .01$. The CAPS-Intensity measure was best predicted by the Homecoming Stress (Return), beta = .24, $df = 100$, $p < .02$, and followed by Childhood Abuse, beta = -.19, $df = 100$, $p < .06$.

Pre- and Post-Treatment Homecoming Stress

Table 6 lists the results of one-way repeated measures ANOVAs for the sub-sample ($n = 89$) that received the intensive 16-week treatment program. As in the larger sample, scores for the Return period were significantly higher than on the Current form of the scale administered upon

Table 6. One Factor Repeated Measures ANOVAs for WHHSS Measures in Treatment Sample (n = 89)

Measure	Period			ANOVA
	Return	Current-Pre-Tx	Current-Post-Tx	$F(2,88)$
Total homecoming	3.28^a (.50)	2.91^b (.46)	2.94^b (.49)	29.64**
Shame	3.06^a (.87)	2.83^b (.78)	$2.95^{a,b}$ (.73)	3.66*
Negative interaction	2.07^a (.77)	1.49^b (.57)	1.60^b (.56)	37.62**
Social withdrawal	4.14^a (.64)	3.64^b (.60)	3.62^b (.57)	32.28**
Resentment	3.77^a (.83)	3.66^a (.80)	3.69^a (.80)	.91ns

^{a,b}Different superscripts indicate means are significantly different at $p < .05$. *$p < .05$. **$p < .0001$.

Items significantly increased from pre-treatment to post-treatment

1. Tried to tell someone about war only to be told they didn't want to hear it.
2. Spoke in public settings about your war experience.
3. Wore Vietnam insignia on hat, shirt or jacket.
4. Felt like hiding your identity as a Vietnam veteran.
5. Wish you never had gone to Vietnam.

admission. However, there were no significant differences between the Current forms administered pre- and post-treatment, and in fact there was a trend ($p < .10$) toward greater Shame after treatment. The five items that were significantly changed are listed in Table 6.

Discussion

The results of this study indicated that the return home from Vietnam was indeed a stressful experience for many veterans in our treatment-seeking sample. These veterans reported being insulted, feeling angry, resentful, and alone, and disinterested in the political debate about Vietnam. The lack of support, celebration, and honor, combined with very rapid timeframe of return from combat, substantiates conceptualizations of a rejecting homecoming experience as interfering with decompression and reintegration. The likely result was that veterans rapidly shut down and cut themselves off emotionally from others. Nevertheless, the fact that the number of tours was among the measures most strongly associated with life stress

and symptomatology after the war supports the role of prolonged war zone stress as an important factor in PTSD.

The critical question is whether the results of this study shed any light on the etiology of PTSD or the prediction of intensity of PTSD symptoms in the Vietnam veteran population. On the one hand, the veterans' experiences of their homecoming were the strongest predictors of frequency and intensity of their PTSD symptoms among the measures used in this study. The Homecoming Stress measures were stronger than Combat Exposure, pre-military factors, or post-military stressors. These results are similar to those found by Fontana and Rosenheck (1994), and Wilson and Krauss (1985), which support the hypothesis that homecoming stress may be implicated in the etiology of PTSD. Although combat exposure was the next best predictor for frequency of PTSD symptoms, it was not as strong as childhood abuse for symptom intensity on the CAPS, or childhood antisocial behaviors for the MISS, underscoring the complexity of the potential influences on PTSD's etiology. The fact that many items on the WHHSS reflected emotional states rather than objective events may also explain the higher correlations between the WHHSS and the CAPS, in comparison with CES.

On the other hand, the absence of a comparison group of combat veterans without PTSD precludes any conclusion being drawn regarding etiology. It is possible that veterans without PTSD also had rejecting homecomings. Further, it is possible that a rejecting homecoming was influenced by already apparent PTSD symptomatology in returning veterans, which explains the correlation between these two variables. However, it is of significance that combat exposure was not correlated with homecoming stress in this study. In addition, the strongest correlations with the CAPS (a clinician assessed symptom measure) were with the Return form of the WHHSS rather than the Current form, supporting the interpretation that the veteran's experience immediately after the war, and not currently, is most predictive of their current symptomatology. If the WHHSS was merely reflective of current distress, then the Current form should be more highly correlated with current symptomatology than the Return form.

It is perhaps reassuring that the veterans judged the negativity of their homecoming reception as having declined since the war, although they reported no change in their anger at the government, family support (due possibly to deaths of parents), or sense that people respect or are proud of them. The ineffectiveness of a 16-week treatment program—specifically designed to "bring them home"—to reduce their Homecoming Stress indicates how strongly these beliefs and feelings are held. The items that did increase included wishing they had never gone to Vietnam, feeling like hiding their identity, and at the same time wearing more insignia (specifically discouraged by the program), speaking in public about Vietnam (a program

requirement), and trying to tell someone about the war (also encouraged by the program). Shameful feelings about the homecoming in fact were increased overall during the treatment, consistent with indications from a related study that this type of intensive inpatient program may increase veterans shame or guilt about their experiences (Johnson et al., 1996).

The factor analysis revealed four main factors: Shame, Negative Interpersonal Interaction, Social Withdrawal, and Resentment. Certainly each of these seems at face value to be an important component of a rejecting homecoming. Of interest is that Negative Interpersonal Interaction was most strongly associated with PTSD symptoms, followed by Resentment and Shame. Social Withdrawal, a factor similar to psychological isolation identified by Wilson and Krauss (1985), was not correlated with symptomatology, and instead was negatively correlated with overall stressful life events during the first 6 months after return, suggesting that isolation may have protected the veterans from additional work and relationship stressors. With regard to the development of PTSD, these data suggest the importance of interpersonal conflict rather than isolation as the major contributing factor. Social Withdrawal may reflect a defensive strategy of avoidance by the veteran that may in part reduce distress as well as interfere with assimilation. Interpersonal conflict and overt denigration by family or society may, in the end, be more damaging an influence on the victim of trauma, not only because they demonstrate lack of support, but also because they carry with them negative attributions and judgments about the victim and the meaning of the traumatic event.

The convergence of these preliminary data with previous reports raises important questions regarding current conceptions of PTSD. It is possible that the reception and cognitive framework placed on the trauma victims' experiences may influence their capacity to process and then integrate the horror of their experience with their pre-trauma personality organization. It is unclear if this effect is cumulative over a long period of time, or is characteristic of a relatively brief period after the return. The data from this study indicate some specificity of the six-month period immediately after the return in predicting PTSD symptoms. It is possible that the buffering effect of a positive social response protects the individual from resorting to incapacitating psychological defenses or even neurobiological alterations that would lead later to the development of PTSD. The degree to which a social community shares in a particular defense or view may be important in supporting the psychological health of its members. Disruptions in the social milieu, such as those that occurred during the 1960s in the United States, may impact on the psychological health of its citizens.

The absence of a standardized scale for Homecoming Stress has made research into this area difficult. The WHHSS may be a useful tool for as-

sessing this variable in Vietnam veterans. The WHHSS has acceptable test-retest reliability and internal consistency, though further studies with other veteran samples are needed to refine the scale. The four derived factors appear to be potentially meaningful dimensions of the homecoming experience, subject to confirmation from future replication studies.

The limitations of this study are that the data are retrospective and, with the exception of the CAPS, were self-administered. These veterans were treatment-seeking and may have been particularly sensitive to homecoming issues. A community sample of combat veterans with presumably less symptomatology was not included and should be utilized in further studies with the WHHSS (Copies of the WHHSS and scoring instructions are available from the senior author at National Center for PTSD-116A, VA Medical Center, 950 Campbell Ave., West Haven, CT 06516.). The existence of a significant relationship between homecoming stress and PTSD within the narrow sample of this study raises important possibilities when a more representative sample is utilized. A more accurate assessment of the comparative role of combat exposure and homecoming stress in the development of PTSD symptomatology will also be made possible through the use of a broader sample.

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